

**ABSTRACT**

A resistor having a desired temperature coefficient of resistance and a total electrical resistance. A first resistor segment has a first temperature coefficient of resistance and a first electrical resistance. A second resistor segment has a second temperature coefficient of resistance and a second electrical resistance. The first resistor  
5 segment is electrically connected in series with the second resistor segment, and the total electrical resistance equals a sum of the first electrical resistance and the second electrical resistance. The desired temperature coefficient of resistance is determined at least in part by the first temperature coefficient of resistance and the first electrical resistance of the first resistor and the second temperature coefficient of resistance and the second electrical  
10 resistance of the second resistor. Thus, in this manner the desired temperature coefficient of resistance of the resistor can be tailored to a desired value by selecting the resistance and temperature coefficients of resistance of the first and second resistor segments that are connected in series. The desired temperature coefficient of resistance can selectively be a positive value, a negative value, or a zero value, depending upon the selection of the  
15 material and the resulting resistance values and temperature coefficient of resistance values for the first and second resistor segments.

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